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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,904	01/28/2005	Takashi Yoshimura	ASA-008	9444
38051 7590 02/08/2008 KIRK HAHN 14431 HOLT AVE SANTA ANA, CA 92705			EXAMINER PATEL, ASHOKKUMAR B	
			ART UNIT 2154	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/523,904

Applicant(s)

YOSHIMURA ET AL.

Examiner

Ashok B. Patel

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/28/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-4 are subject to examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Chava et al. (hereinafter Chava) (US 2004/0156495 A1).

Referring to claim 1,

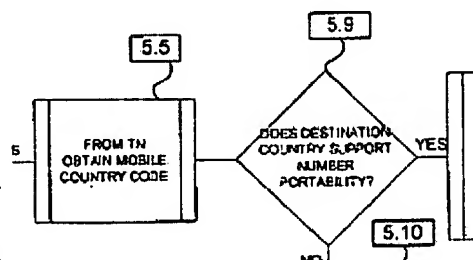
Chava teaches a multimedia message service apparatus (ABSTRACT: "Network System and Method for facilitating message exchange between mobile subscribers belonging to the same or different public land mobile networks, possibly incorporating different standards. Message exchange between two subscribers of the same or different networks may involve one or more lookups on subscription data, zero or more message transformations, one or more routing decisions including application of costing functions, and, storage and propagation of the message in one or more Core or Intermediary networks. The messages may be of type, among others, SMS (Short

Message Service), MMS (Multimedia Message Service), or EMAIL.”) characterized in that it comprises:

first decision means that, when receiving a multimedia message that has been transmitted, references an international prefix table to decide whether or not the message is to be transmitted internationally to the forwarding destination, based on transmission destination information in said multimedia message (Fig. 5,



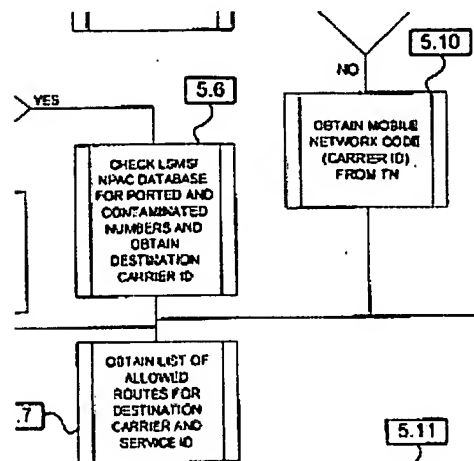
second decision means that, if the first decision means decides that the message is to be transmitted to the forwarding destination, references a first routing table based on said transmission destination information to decide whether or not the forwarding



destination supports number portability(Fig. 5,

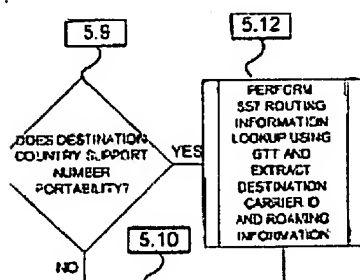
first acquisition means that, if the second decision means decides that the forwarding destination does not support number portability, acquires the domain name

of the forwarding destination from said transmission destination information by



referencing said first routing table (Fig. 5,

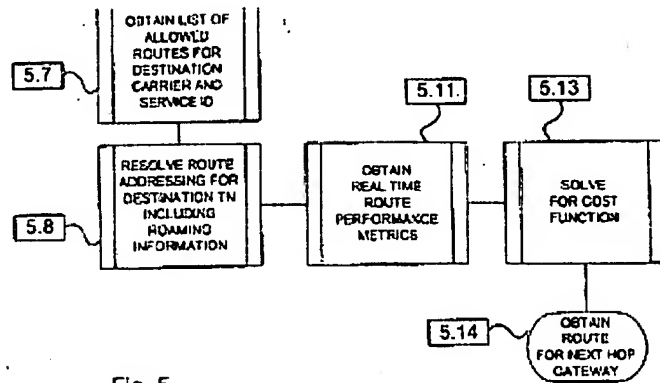
second acquisition means that, if said second decision means decides that the forwarding destination does support number portability, acquires international identification information corresponding to said transmission destination information by inquiring registration means that registers subscriber data and acquires the domain name of the forwarding destination by referencing the second routing table based on the international identification information that has thus been acquired (Fig. 5,



; and

forwarding means that forwards said multimedia message to the forwarding destination of the domain name that has been acquired by said first acquisition means

or said second acquisition meas.



(Fig.5, Fig. 5

In addition to above please refer to para. [0092]- [0097]).

Referring to claim 2,

Chava teaches the multimedia message service apparatus according to claim 1 characterized in that said first routing table comprises information including the country code and the domain name of each operator specified by the operator code and information as to whether or not number portability is supported and said second decision means decides whether or not the forwarding destination operator supports number portability by searching said first routing table using as keys the country code information and operator code information in said transmission destination information. (para. [0072] Another important class of systems preferably associated with the present invention is Wireless Number Portability and Routing databases. These systems are realized using database systems with data feeds coming from various sources such as NANP LERG data providers, real time NPAC database feeds and carrier routing table updates.", para. [0094] For an International Number, first a country code is extracted in module 5.5. If the country has implemented number portability then one of two methods

is preferably used to find the destination carrier. In one method, a local ported database is used (similar to the one used for national ported number lookup). This ported database is built from information supplied by the carriers and 3.sup.rd party providers. Another method is to perform a remote database lookup. One such method is to use an SS7 Global Title Translation database in which a route request message is routed to the right Home Location Register (HLR). The HLR then responds with appropriate routing information which can be used to extract home carrier network as well as roaming information. The SS7 method is mentioned in module 5.12 in FIG. 5.")

Referring to claim 3,

Chava teaches the multimedia message service apparatus according to claim 1 characterized in that said first acquisition means acquires the domain name of the forwarding destination from the country code information and operator code information in said transmission destination information. (para. [0066] Intermediary Network Description [0067] The conceptual diagram in FIG. 1 can be implemented in a number of ways realizing all the functionality mentioned in this embodiment. By breaking out the functionality of this invention it is possible to describe possible embodiments of network and system realization of this Invention. [0068] The present invention primarily describes the functionality of interconnecting various carrier and service provider networks to the Intermediary network. The Intermediary network can consist of one of more POPs (Point of Presence) for network connectivity and one or more data centers for staging message switching equipment. A practical realization comprises a distributed network with multiple data centers and POPs interconnected by an IP

backbone. The service provider networks (carrier networks) are typically connected to one or more of the POPs using Wide Area Network connections such as T1, Frame Relay, and Internet VPN.

[0069] These network connections typically terminate on network end points connected to routers. In addition, a well formed network infrastructure consist of firewalls for security purposes, load balancers, switches for interconnecting network segments and various other ancillary devices such as Intrusion Detection Systems, Network Analyzers etc. Also, Domain Name Servers (DNS) infrastructure for resolving domain names into IP address and vice-versa are also typically realized as part of the network equipment. [0070] Since the invention details the Intermediary network as a distributed message switch, the system preferably comprises of one or more (typically several for scalability and redundancy) message switching systems implementing the transformation and routing modules indicated in FIG. 1. These systems can be implemented using industry standard servers. Further, these message switching systems are interconnected by a messaging bus to transfer SMT (FIG. 6) and SML (FIG. 6) formatted messages as well as various other management type messages. For SMS messaging, the core switching systems typically consist of Short Message Service Center (SMSC) functionality. For MMS messaging, the core switching systems typically consist of Multi-media Messaging Service Center (MMS) functionality. In addition, email messaging systems are supported by traditional email servers and relays. [0071] Various industry standard protocols are supported by the above mentioned gateways. These include, for SMS: Short Message Peer to Peer protocol (SMPP), EMI/UCP,

SMTP, HTTP, CIMD, GSM/ANSI 41 MAP and the like. The switching systems mentioned in the previous paragraph support these protocol units on as needed basis depending upon carrier requirements. Various backend database servers for logging and billing functionality are also typically implemented in an embodiment. [0072] Another important class of systems preferably associated with the present invention is Wireless Number Portability and Routing databases. These systems are realized using database systems with data feeds coming from various sources such as NANP LERG data providers, real time NPAC database feeds and carrier routing table updates. [0163] In the above example, it is possible to attach an SMTP addressable Internet domain name to a telephone number, and thereby preserve the originating Telephone Address in the new address structure. In certain other cases, it may be necessary to change the originating address in order for messaging to work in the destination network. For example, certain mobile terminals (e.g., Skytel's pagers) in the United States have an associated "800" telephone number. In the North American numbering plan, "800" numbers represent toll free numbers. While these numbers are often routable (using another underlying NANP number) in many North American networks, these numbers do not necessarily work (routable) in overseas networks. Under such circumstances, if a mobile subscriber with an "800" directory number sends a message to an overseas subscriber, and if the overseas subscriber is reachable over an SS7 network, then it may be necessary for the Intermediary network to represent the originating subscriber using a temporary or even a permanent routing number and maintain a table to translate the addresses for 2-way messaging. [0164] The foregoing discussion leads to

a novelty in accordance with the present invention where subscribers of telecom carrier networks served by the Intermediary network for bridging messages may be represented by multiple virtual addresses within the Intermediary network in order to facilitate certain types of messaging. These addresses are typically routable in their respective network domains world-wide and translation of these virtual addresses to physical (carrier assigned) addresses takes place within Intermediary network. [0165] An example shown in FIG. 9 clarifies the concept. In FIG. 9, mobile subscriber M1 belongs to carrier C1, mobile subscriber M2 belongs to carrier C2, and mobile subscriber M3 belongs to carrier C3. Further, mobile subscriber M2 is (among others) addressable by SMTP (email) protocol and mobile subscriber M3 is (among others) addressable by SS7 network. The Intermediary Network represented in FIG. 9 would then have virtual addresses for mobile subscriber M1 for both Email delivery as well as SS7 delivery. For Email delivery, the domain is hosted by the Intermediary with Domain Name Servers pointing the SMTP protocol address to the host servers. The originating phone number, in this case 8005551212 is represented as a virtual email address in Intermediary network as 8005551212@C1MSG.NET. When the addressed party M2 receives a message (Message 4 in FIG. 9) originated by M1, the reply address would show up as the virtual email address enabling M2 to reply to that address. When the email reply is received by the Intermediary, the Intermediary strips the virtual address and sends the message back to the originating subscriber M1 using native Telephone Number addressing.")

Referring to claim 4,

Chava teaches the multimedia message service apparatus according to claim 1 characterized in that said second routing table comprises domain name information for each of the operators specified by the country code information and operator information and said second acquisition means acquires the forwarding destination domain name by searching said second routing table using as keys information identifying the country and information identifying the operator in said international identification information. (para. [0066] Intermediary Network Description [0067] The conceptual diagram in FIG. 1 can be implemented in a number of ways realizing all the functionality mentioned in this embodiment. By breaking out the functionality of this invention it is possible to describe possible embodiments of network and system realization of this Invention. [0068] The present invention primarily describes the functionality of interconnecting various carrier and service provider networks to the Intermediary network. The Intermediary network can consist of one or more POPs (Point of Presence) for network connectivity and one or more data centers for staging message switching equipment. A practical realization comprises a distributed network with multiple data centers and POPs interconnected by an IP backbone. The service provider networks (carrier networks) are typically connected to one or more of the POPs using Wide Area Network connections such as T1, Frame Relay, and Internet VPN.

[0069] These network connections typically terminate on network end points connected to routers. In addition, a well formed network infrastructure consist of firewalls for security purposes, load balancers, switches for interconnecting network segments and various other ancillary devices such as Intrusion Detection Systems,

Network Analyzers etc. Also, Domain Name Servers (DNS) infrastructure for resolving domain names into IP address and vice-versa are also typically realized as part of the network equipment. [0070] Since the invention details the Intermediary network as a distributed message switch, the system preferably comprises of one or more (typically several for scalability and redundancy) message switching systems implementing the transformation and routing modules indicated in FIG. 1. These systems can be implemented using industry standard servers. Further, these message switching systems are interconnected by a messaging bus to transfer SMT (FIG. 6) and SML (FIG. 6) formatted messages as well as various other management type messages. For SMS messaging, the core switching systems typically consist of Short Message Service Center (SMSC) functionality. For MMS messaging, the core switching systems typically consist of Multi-media Messaging Service Center (MMS) functionality. In addition, email messaging systems are supported by traditional email servers and relays. [0071] Various industry standard protocols are supported by the above mentioned gateways. These include, for SMS: Short Message Peer to Peer protocol (SMPP), EMI/UCP, SMTP, HTTP, CIMD, GSM/ANSI 41 MAP and the like. The switching systems mentioned in the previous paragraph support these protocol units on as needed basis depending upon carrier requirements. Various backend database servers for logging and billing functionality are also typically implemented in an embodiment. [0072] Another important class of systems preferably associated with the present invention is Wireless Number Portability and Routing databases. These systems are realized using database systems with data feeds coming from various sources such as NANP LERG

data providers, real time NPAC database feeds and carrier routing table updates. [0163]

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Conclusion

Examiner’s note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the


claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 6:30 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan A. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

abp



Ashok B. Patel
Examiner
AU 2154